Daily stress and coping among Emergency Response Officers: a case study

Abstract

Purpose: Police in Europe are facing increased demands and diminished resources, and this is particularly prominent among Emergency Response Officers (EROs) working in poorer countries such as Portugal. Considering that daily stress and limited coping skills can result in detrimental consequences for officers´ health and society welfare, this study investigated stress and coping among Portuguese EROs.

Design: EROs completed daily diaries over 11 working days. Each diary entry included an open-ended stressor, coping section and a Likert-type scale to evaluate coping effectiveness. Data was analyzed using inductive and deductive content analysis procedures. The frequency of stressors, coping and coping effectiveness were calculated.

Findings: EROs reported facing more operational stressors, particularly public disorder situations. However, gun situations were perceived as the most intense stressor. Emotion-focused coping (i.e., peer support) was more used than problem-focused. Despite variation in coping effectiveness in accordance to stressor experienced, longitudinal analysis suggests that PF coping is more effective.

Research limitations/implications: Longitudinal methodologies should contemplate stress appraisal and coping effectiveness in order to fully understand stress and coping. Future studies should employ this methodology at a larger scale and over longer periods.

Practical implications: Intervention programs for EROs should be multidimensional, targeting work conditions and resources, stress management, and coping effectiveness.

Originality/value: Findings provide strong recommendations for future research and applied implications for stress prevention and effective coping interventions.

Keywords: stress, coping, diary methodology, police forces

Daily stress and coping among Emergency Response Officers: a case study

Stress is an inevitable factor in life, but coping plays an important role in modifying stress responses. Police work is one of the most stressful occupations (Strahler and Ziegert, 2015). Considering their strong responsibility toward society security maintenance, police officers are constantly under pressure, by being exposed to multiple stressors and uncertainty and they have to respond to problems, typically without sufficient warning or preparation time (Kitaeff, 2011). This is particularly more evident among Emergency Response Officers (EROs), since they are in the first line ready to respond to any emergency situation.

The ability to manage stressful events is called coping. According to Lazarus and Folkman (1984) coping is a process that involves cognitive and behavioral efforts to manage stress. According to some researchers in the area of occupational health (Anshel *et al.,* 2013) police officers seems to have limited coping abilities. In other words, the use of ineffective coping could be explained by the highly stressful work environment, lacking in cordial professional relationships with supervisors and perceived low self-control (Anshel *et al.* 2013). As suggested by Anshel (2000) the ineffective use of coping by police officers may be related with the stereotypical view that any expression of stress or problems associated with the policing job might by viewed as a personal weakness.

Despite previous recommendations, police occupational health has been overlooked and several limitations have been found in previous literature. Particularly, the cross-sectional and retrospective nature of study designs, the controversy in stress and coping process definition and conceptualization and the diversity of police forces across Europe. A possible solution to overcome this gap is the use of qualitative and longitudinal methods, to capture the dynamic

nature of stress and coping process in ecological settings (Dewe, 2001). Thus, the present study contemplated a diary methodology, based on the assumption that daily diaries give a better understanding of working behavior, since they go beyond traditional static models of human behavior, allowing for the comprehension of changing processes over time, such as stress and coping in the work contexts (Ohly *et al.,* 2010). It is important to note that this study does not intend to replace previous methodological traditions accomplishments, but otherwise aims to provide a deep insight about the potentialities of diary methods as a complementary longitudinal and qualitative method with promising results (Clarkson and Hodgkinson, 2007) particularly among police personnel. Thus, the current diary case study aims to (1) investigate the frequency and the appraisal of daily stressors (2) determine the preferred coping strategies and, (3) ascertain its effectiveness among EROs.

Transactional model of stress and coping

According to the transactional perspective from Lazarus and Folkman (1984) stress occurs when the individual perceives that the demands of a situation exceed individual resources. Hence, an event will only lead to a stressful response if it is perceived as being threatening to the person, depending on the individual's subjective perception. According to this model, stress and coping is a dynamic and recursive process that includes interactions between the environment, individual appraisal and efforts to cope with the implications originated by these events. The key issue in this model is the appraisal process. According to Lazarus (1990) there are two types of appraisal: Primary appraisal that encompasses the initial evaluation of the situation, where the person gives personal meaning to events in terms of harm, threat or challenge. When an event is perceived as negative in the primary appraisal process, the individual moves to a secondary

appraisal, characterized by the evaluation of the individual's ability to cope with a situation, and whether or not the individual has the resources to deal with that situation. Secondary appraisal interacts with the primary appraisal to determine the emotional reaction to event (Lazarus, 2000).

Considering that stress is an inevitable factor in life, it is coping that makes the difference in adaptation processes. According to Lazarus and Folkman (1984, p.141) coping is characterized by "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". The most popular taxonomy of coping was proposed by Folkman and Lazarus who described coping as either Problem-focused (PF) or Emotion-focused (EF). PF involves people´s efforts to deal with the situation (e.g., planning, information seeking or increasing efforts), whereas EF involves efforts to regulate the emotional distress associated with the situation (e.g., mental withdrawal, minimizing and wishful thinking).

Considering that research on coping is controversial, since some investigation suggested that EF coping is ineffective and increases stress but the opposite has also been described, it is important to consider coping effectiveness measures (Dewe *et al*., 2010). According to the same authors, it is important to explore both primary and secondary appraisals in particular events, in order to understand why people use specific responses to stressors and whether they are in fact effective.

Stress and coping among police forces

Police work has been identified as one of the most stressful occupations in modern society (Maran *et al.,* 2015; Shane, 2013). European security organizations in particularly have been exposed to additional sources of stress, related with terrorist attacks and emigration. To face

these increased demands, security organizations have to adapt quickly what may increase the potential to experience added work-related stress problems. Thus, causing a detrimental impact not only to the officer, but also to society (Stanley *et al*., 2016). Police stress has been commonly categorized into two dimensions: organizational and operational (Huddleston *et al.,* 2007; Shane, 2013). Organizational factors are related with bureaucracies and practices of the police institution (e.g., the quasi-military nature of police institutions), and operational stressors are associated with the unique nature of the work carried out by the officers while working in the field (e.g., shooting episodes). There is some evidence suggesting that organizational stressors are the best predictors of stress. As an example, a study conducted by Suresh *et al.* (2013) among 220 Indian police personnel aiming to examine police stressors cross-sectionally found that organizational stressors were more prevalent than task-oriented stressors. However, it is important to note that in this particular study similarly to most research in this area, the role of the police is not clearly specified, which leads to a problem when understanding stressors typology among this population. The diversity of police forces and respective duties across European police impairs comparisons between countries (Vertovec, 2007). As an example, Portugal features numerous criminal police organizations, that can be classified according to several criteria (e.g., administration; territorial scope, internal security system inclusion, juridical nature and attributions). Previous evidence among Portuguese police forces suggests that the different roles officers play, result in the experience of distinct stressors (Gonçalo *et al.,* 2010).

In response to stress, police uses a variety of coping strategies. According to some researchers, police personnel seem to have limited coping abilities (Anshel *et al.,* 2013).

The literature is not unanimous on police coping preferences and abilities. As an example, some evidence suggests that police officers show a tendency to use more PF coping (e.g.,

anticipated planning, dealing with problems immediately, priorities establishment) (Brown *et al*., 1996). However, other studies found support for the use of more EF coping (e.g., talk with colleagues, work more, keep things to themselves) (Alexander and Walker, 1994). Although these findings are important, they fail to indicate whether coping strategies used are the ones perceived to be effective.

Current study

The current case study sought to investigate: 1) frequency and the appraisal of daily stressors, 2) the coping strategies used to manage daily stressors, and 3) subjective evaluations of coping effectiveness among EROs. A diary research methodology was used following previous research recommendations across police science, stress and coping research (Segerstrom and Connor, 2012; van Gelderen *et al.,* 2016). The transactional perspective of stress and coping proposed by Lazarus and Folkman was the theoretical framework underpinning the study. As a result, instead of only investigating the typology of daily stressors, stress appraisal will also be considered to provide insights on level of stressfulness experienced (Anderson *et al.,* 2002). Furthermore, the way officers deal with stress will also be analyzed in a complementary way, by contemplating coping effectiveness (Lazarus and Folkman, 1984).

To our knowledge this is the first study investigating stress, coping and coping effectiveness among police personnel using a daily diary. By adopting this methodology, the current paper promises to impact the occupational health literature in policing by overcoming previous studies limitations. Firstly, most of previous research has been retrospective and cross-sectional in nature, failing to analyze within-person daily stress fluctuations (Segerstrom and Connor, 2012). Secondly, research on stress rarely analyzes the appraisal of a situation and this

information is crucial to understand stress experiences (Anderson *et al.,* 2002; Colwell *et al.,* 2011). Thirdly, limited studies have contemplated coping effectiveness among police personnel, restricting conclusions on adaptive coping for the population. Finally, most policing studies fail to specify police force roles and duties involved, limiting generability of findings to other countries (Kaiseler *et al*., 2016). Taking into considerations the particularities of the nature of the police job, it is believed that the current study will provide strong practical implications for stress prevention tailored for this specific population.

Method

Participants and Procedure

Fourteen EROs from the National Security Police based in Porto city in Portugal volunteered to participate in this study. Regarding the criteria for participation, it was required that participant's role was Emergency Response Officers. All participants performed emergency police duties, since they were part of a rapid intervention team that were called to intervene in critical situations at any time. The age range was 30-45 years (M = 35, SD= 5.3), and they have more than 5 years of experience in policing. All police officers worked in daily 8-hour shifts.

The study was approved by the University Ethics Committee. The project was presented in a public session to the Police Commanders. Following this stage, instructions for the diary procedure were given face-to-face by the first author and police officers were asked to complete the appropriately date diary booklet at the end of each shift during 11 work days and instructed not to complete the diary on the days off work. Participants were also instructed about the confidentiality of their responses and it was explained that the diary was used only for research purposes. After completing the diary, participants returned it to the researchers.

Materials

A simple and portable paper and pencil format (A5 sized, 11 pages) was adopted. Participants were asked to note the date of completion and full researcher contact details were given to all officers, who were encouraged to use these whenever they need it. The diary booklet consisted of four sections: a) an open-ended stressor boxes (Levy *et al.,* 2009) where participants indicated the most stressful situation during their working day; b) a stress intensity Lickert-type scale (Barnett *et al*., 2005) to rate their primary appraisal, by indicating how much stress they felt during the indicated situation on a 5-point Lickert-type scale (1 = *low* to 5 = *high*); c) an open-ended coping responses section, where participants wrote what they did to manage the indicated stressor and d) a perceived coping effectiveness Lickert-type scale (Nicholls *et al.,* 2006) to rate how effective their coping strategy was at managing the stressor on a 5-point Lickert-type scale (1 = *ineffective* to 5 = *very effective*).

Data analysis

A qualitative and quantitative between-person variation analysis, based on an event-based approach was conducted. The analysis procedure will be explained below taking in consideration the different types of data: stressors and stress appraisal, coping and coping effectiveness. These analyses are similar to previous research in the area of stress and coping (e.g., Levy *et al.,* 2009; Nicholls *et al*., 2005; 2006; Nicholls and Polman, 2007).

Stressors and stress appraisal.

The written open-ended responses were transcribed verbatim and subjected to an inductive content analysis procedure as suggested by Maykut and Morehouse (1994). The data was coded into stressors categories by the first author and then verified by the other authors (e.g.

Nicholls and Polman, 2007). Then, stressors categories generated for stressor responses were categorized into more general dimensions labeled as Operational or Organizational Stressors as recommended in the literature (e.g., Violanti and Aron, 1995). For instance, "Some citizens tried to attack us" was classified as "Aggression Attempts" that was categorized as "Operational Stressors". The frequency and stress appraisal was calculated considering the intensity and mean intensity of each stressor. This approach is similar to previous research in the area of stress appraisal (e.g. Kaiseler *et al*., 2009).

Coping and coping effectiveness.

Data from the open-ended coping responses section were transcribed verbatim and subjected to an inductive content analysis (Maykut and Morehouse, 1994) and deductive content analysis procedure (Pattton, 2002). The first phase of data analyzes was inductive. Similar coping strategies were grouped together as first-order themes and assigned a descriptive label. A rule of inclusion was provided for each theme. Similar first-order themes were grouped under more abstract labels as second-order themes (e.g. "Increased concentration on task" was assigned the rule of inclusion "refers to police officer trying to get focused on the task to cope" and was coded in the second order theme of "Active coping"). The second part of data analysis involved a deductive content analysis procedure. A discussion between the first and the second author was performed in order to verify the appropriateness and authenticity of the second-order themes (Patton, 2003). Following the modification of the coding scheme, there was 99,5% agreement. Second-order themes were then deductively classified according to the coping function that they were apparently intended to serve using the dimensions PF and/or EF as recommended in the literature (Lazarus and Folkman, 1984).

In this study, we adopt the categorization of Carver *et al*. (1989) in the development of the COPE inventory, considering that this instrument is based on the Lazarus and Folkman model (Lazarus and Folkman, 1984). The COPE inventory includes 13 conceptually different scales: (1) *active coping*: process of taking active steps to remove or circumvent the stressor or to enrich its effects; (2) *planning:* involves thinking about how to cope with the stressor; thinking about what steps to take and how to best handle the problem; (3) *suppression of competing activities:* means putting other plans/things aside, trying to avoid becoming distracted by other events; (4) *restraint coping*: waiting until an appropriate opportunity to act presents itself, and not acting prematurely; (5) *seeking social support for instrumental reasons:* asking advice, assistance or information in order to manage or resolve the situation; (6) *seeking social support for emotional reasons*: getting moral support, sympathy, or understanding of others; (7) *focusing on and venting of emotions: t*endency to focus on the aspects that distress or upset the individual and to ventilate those feelings; (8) *behavioral disengagement:* tendency to reduce the efforts to deal with the stressor, giving up of the aims with which the stressor is interfering; (9) *mental disengagement:* assuming a wide diversity of activities that serve to distract the individual from thinking about the behavioral dimension or goal with which the stressor is interfering; (10) *positive reinterpretation and growth*: tendency to attribute a new and different meaning to the distressing emotions rather than dealing with the stressor; (11) *denial:* refusal to believe that the stressor subsists or try to act as though the stressor is not real; (12) *acceptance:* recognizing the reality of a stressful situation, assuming that nothing could be done; (13) *turning to religion:* tendency to turn to religion in time of stress; (Carver et al., 1989).

Frequencies for coping, mean coping effectiveness scores for each coping strategy used and global coping effectiveness scores over the 11-day period was calculated for all the

participants. To provide an indication of the effectiveness of coping strategies deployed to manage the three most cited stressors, the coping effectiveness of each strategy in relation to each stressor was calculated and divided by the frequency of coping themes reported for managing the particular stressor. This generated a mean coping effectiveness score for each coping strategy in relation to each stressor managed. To understand the effectiveness of both PF and EF coping over the 11 work day period, the sample was divided into two independent groups with the same size using the median point of the ranking orders (PF; EF). An independent variable was created with two levels for representing the two different coping dimensions in a single independent variable. Mann-Whitney U test was used to compare the difference in ratings of coping effectiveness (PF and EF type).

Results

From the 11 daily sheets received, a total of 146 answers were given by the police officers, of which 46 referred to non-stressful events. Eight missing answers were accounted. Additionally, a total of 112 stressors and 112 coping responses were reported. Results found were analyzed separately based on three main categories: stressors (including stress appraisal), coping and coping effectiveness.

Stressors and stress appraisal

Stressors reported were displayed into two general dimensions: operational (cited 88 times accounting for 79% of total stressors) and organizational stressors (cited 24 times accounting for 21% of total stressors) (see Table 1). The three most cited stressors were public disorder (32), inadequate resources (11) and vehicles chase (10). Regarding stress appraisals for

the stressors cited more than five times, the three more intense stressors were gun situations (*M*=4.8), inadequate resources (*M*=4.6), and public disorder (*M*=3.8).

[TABLE 1 ABOUT HERE]

Coping

First order themes contemplated nine coping strategies; second order themes included six coping responses and two coping general dimensions (PF, EF) (see Table 2). Regarding general dimensions, EF coping was the most reported (cited 75 times, accounting for 67% of total coping responses), followed by PF coping (cited 37 times, accounting for 33% of total coping responses). Peer support (cited 34 times) was the most reported coping strategy, followed by distraction (28) and argued (24) respectively.

[TABLE 2 ABOUT HERE]

Coping effectiveness

Regarding the connections between the three most reported stressors, coping and coping effectiveness, a range of different types of coping strategies were reported (see Table 3). "Peer support" was used to deal with all three of the major stressors. The mean effectiveness of the coping strategies varies in relation to the stressor.

[TABLE 3 IS ABOUT HERE]

When analyzing a day-to-day variation in coping effectiveness it appears that PF coping seems to be perceived as more effective when dealing with stressors compared with EF coping (see Figure 1). The Mann-Whitney U test indicated that the use of PF coping is significantly more effective for EROs (*Md*=3.89) than EF coping (*Md*=3.30), U =10.00, *p* =.037.

[FIGURE 1 ABOUT HERE]

Discussion

Our findings indicate that EROs experience a variety of stressors and it appears that operational stressors are the ones more commonly reported. Particularly, "gun situations" seem to be appraised as most stressful. When analyzing coping EROs tend to use more EF coping, particularly "peer support". However, despite variation in coping effectiveness in accordance to stressor experienced, longitudinal analysis suggests that PF coping seems to be more effective.

Previous cross-sectional research investigating stressors typology among police officers indicate that organizational stressors are the most commonly reported stressors (Suresh *et al.,* 2013). However, current findings suggest that operational stressors seem to be most common among EROs. This could be due to the operational nature of the work, as participants in the current study were part of a rapid intervention team that mainly performed operational duties. In opposition, the study by Suresh *et al.* (2013) does not specify the nature of officers' duties what restricts conclusions when comparing findings between studies. Hence, reinforcing the need to identify police forces role and responsibilities when conducting research in policing (Kaiseler *et al*., 2016). Another alternative explanation for the different findings across studies is the novel daily diary method used, which might be more sensitive to assess stress and coping in policing compared with retrospective cross-sectional measures. Future research is required to confirm this assumption.

Regarding the frequency and stress appraisal for each stressor, findings suggest that not always the most frequently reported stressors were the ones perceived by EROs as most intense.

As an example, although the stressor "gun situations" was not frequently reported, it seemed to be appraised as severely more intense compared to frequently reported stressors. Hence, these findings suggest that high stressfulness stressors should not be neglected and support the argument that the frequency of a stressor is not necessarily correlated with their impact (Anderson *et al.,* 2002). Current findings highlight the need to assess stress appraisal on a daily basis when aiming to understand sources of stress among EROs.

When analyzing the most frequently reported coping strategies used, these were EF, particularly "peer support". Although EF coping was more frequently reported than PF coping, the latter seems to be consistently rated as more effective. In line with these findings, Kaufmann and Beehr (1989) conducted a study with 121 American PO aiming to understand buffering effects of social support (EF coping) in the stressor-strain relationships. The authors found some evidence of "reverse buffering", which suggests that social support interacted with job stressors to increase stress intensity rather than alleviate it. Although this is not a common finding, a possible explanation might be that social support may have a "negative buffering" effect (LaRocco *et al* 1980) for officers. In other words, the support from colleagues may be negative, due to lack of supportive colleagues or inefficiency of colleagues' advice to help officers deal with the situation at hand. Our findings suggest that EROs may not be using EF strategies (e.g., social support) effectively (e.g., Balmer *et al.,*2013). However, further research is needed to confirm this assumption and fully understand the "reverse buffering" effect. For this purpose, a wider range of variables such as the content of communication with supportive colleagues, sources of stressors and support should be analyzed.

In agreement with our current results emphasizing that PF coping was rated as more effective than EF coping among EROs, Evans *et al.* (1993) suggested that police culture and

training should emphasize the use of more PF coping rather than EF. Nevertheless, as proposed by Balmer *et al.* (2013) EF coping should not necessarily be perceived as detrimental to officers' wellbeing. Alternatively, PO should be trained to better regulate their emotional responses to stress, in order to better deal internally (e.g., with colleagues) and externally (e.g., with civilians) and meet the professional requirements. As an example, police officers are required to express anger when correcting a criminal, while at the successive moment they should be able to show empathy for a crime victim and it is important to highlight that police public image is created based on these interactions.

Current findings add support to previous literature suggesting that coping abilities in policing deserve further attention (Anshel *et al.,* 2013). The methodology used was key to understand the pattern of coping effectiveness, otherwise one could erroneously conclude that EF was most effective. Future research should continue to use longitudinal designs and ecological research methods to assess stress and coping in policing (Rodrigues *et al*., 2015). Furthermore, applied practitioners and officers may find the results useful for targeted interventions. Hence, considering that the work of EROs is characterized by intervening under high stressful situations, where it is difficult to think clearly and consider the best coping strategy, it seems essential to enhance officers´ ability to cope with stressors by developing preventive tailored stress management programs adapted to their needs. As an example, when stressors are operational in nature, police organizations can support EROs by providing training on more oriented-action solutions like motor skills and physical efficiency. Accordingly, increased fitness level in policing can also foster a healthier workforce, able to better cope with chronic stress (Gerber *et al.,* 2010). Thus, this investment is likely not only to result in the welfare of EROs but may also impact society safety (Maran *et al*., 2014).

This study has some limitations. Particularly, its exploratory nature and the small sample used that may restrict conclusions and generalizability of findings. However, despite the limitations, the current study is pioneer in terms of specific population under study and methodology used. Future research should use larger samples to test the generalization of the findings. In addition, a comparison between other police forces is encouraged to fully understand stress appraisals and coping mechanisms in policing, informing the design of tailored coping interventions.

References

Alexander, D. and Walker, L. (1994), "A study of methods used by Scottish police officers to cope with work-induced stress", *Stress Medicine,* Vol. 10, pp. 131-138.

Anderson, G., Litzenberger, R. and Plecas, D. (2002), "Physical evidence of police officer stress", *Policing: An International Journal of Police Strategies and Management,* Vol. *25,* pp. 399-420.

Anshel, M.H. (2000), "A conceptual model and implications for coping with stressful events in police work", *Criminal Justice and Behavioral*, Vol. 27 No. 3, pp.375-400.

Anshel, M.H., Umscheid, D. and Brinthaupt, T.M. (2013), "Effect of a combined coping skills and wellness program on perceived stress and physical energy among police emergency dispatchers: An exploratory study", *Journal of Police and Criminal Psychology*, Vol. 28, pp. 1-14.

Balmer, G.M., Pooley, J.A. and Cohen, L. (2013), "Psychological resilience of Western Australian police officers: relationship between resilience, coping style, psychological functioning and demographics", *Police Practice and Research,* Vol. 15 No.4, pp. 1-13.

Barnett, R.C., Steptoe, A. and Gareis, K.C. (2005), "Marital-role quality and stress-related psychobiological indicators", *Annuals Behavioral of Medicine,* Vol. 30 No. 1, pp. 36–43.

Brown, J., Cooper, C. and Kirkcaldy, B. (1996), "Occupational stress among senior police officers", *British Journal of Psychology,* Vol. 87, pp. 31-42.

Clarkson, G.P. and Hodgkinson, G.P. (2007), "What can occupational stress diaries achieve that questionnaires can't?", *Personnel Review*, Vol. 36 No. 5, pp. 684-700.

Colwell, L.H., Lyons, P.M., Bruce, A.J., Garner, R.L. and Miller, R.S. (2011), "Police officers' cognitive appraisals for traumatic events: implications for treatment and training", *Applied Psychology in Criminal Justice,* Vol. 7, pp. 106-132.

Dewe, P.J. (2001), "Work stress, coping and wellbeing: Implementing strategies to better understand the relationship", in Perrewe, P.L. and Ganster, D.C. (Eds), *Research in Occupational stress diaries Occupational Stress and Well Being: Exploring Theoretical Mechanisms and Perspectives,* Elsevier, Amsterdam, pp. 63-96.

Dewe, P.J., O´Driscoll, M.P. and Cooper, C.L. (2010), *Coping with work stress – A review and critique,* Wiley-blackwell. Chichester.

Evans, B. J., Coman, G. J., Stanley, R.O. and Burrows, G.D. (1993), "Police officers coping strategies: An Australian police survey", *Stress Medicine,* Vol. 9, pp. 237-246.

Gerber, M., Kellmann, M., Hartmann, T. and Puhse, U. (2010), "Do exercise and fitness buffer against stress among Swiss police and emergency response service officers", *Psychology of Sport and Exercise*, Vol.11, pp. 286-294.

Gonçalo, H., Gomes, A., Barbosa, F. and Afonso, R. (2010), "Stresse ocupacional em forças de segurança: um estudo comparativo", *Análise Psicológica*, Vol. 1 No.XXVIII, pp. 165-178.

Huddleston, L., Stephens, C. and Paton, D. (2007), "An evaluation of traumatic and organizational experiences on the psychological health of New Zealand police recruits" *Work*, Vol. 28, pp. 199-207.

Kaiseler, M., Polman, R. and Nicholls, A. (2009), "Mental toughness, stress, stress appraisal, coping and coping effectiveness in sport", *Personality and Individual Differences,* Vol. 47, pp. 728-733.

Kaiseler, M., Queirós, C. and Rodrigues, S. (2016), "New approaches to compare police practice in Europe: an occupational health perspective", in Nogala, D., Neidhardt, K., Gorgen, Th., Mesko, G., Fiquet, J.M. and Kersten J. (Ed.), *European Police Science and Research Bulletin. Special Conference Issue*, pp. 139-142.

Kaufmann, G.M. and Beehr, T.A. (1989), "Occupational stressors, individual strains and social supports among police officers", *Human Relations,* Vol. 42 No.2, pp. 185-197.

Kitaeff, J. (2011), *Handbook of police psychology*, Routledge Tayler & Francis Group, New York, N.Y.

LaRocco, J.M., House, J.S. and French, J.R.P. (1980), "Social support, occupational stress, and health". *Journal of Health and Social Behavior,* Vol. 21, pp. 202-218.

Lazarus, R.S. (1999), *Stress and emotion: A new synthesis*, Springer, New York, NY.

Lazarus, R.S. (2000), "How emotions influence performance in competitive sports", *The Sport Psychologist*, Vol. 14, pp. 229-252.

Lazarus, R.S. and Folkman, S. (1984*), Stress, appraisal, and coping,* Springer, New York, NY.

Levy, A., Nicholls, A., Marchant, D. and Polman, R. (2009), "Organizational stressors, coping and coping effectiveness: a longitudinal study with an elite coach", *International Journal of Sports Science & Coaching*, Vol. 4 No. 1, pp. 31-45.

Maran D.A, Varetto A., Zedda M. and Franscini, M. (2014), "Stress among Italian male and female patrol police officers: a quali-quantitative survey", *Policing: An International Journal of Police Strategies & Management,* Vol. 37 No.4, pp. 875-890.

Maran, D.A., Varetto, A., Zedda, M. and Ieraci, V. (2015), "Occupational stress, anxiety and coping strategies in police officers", *Occupational Medicine,* Vol. 65, pp. 466–473.

Maykut, P. and Morehouse, R. (1994), *Beginning qualitative research: A philosophic and practical guide*, Falmer Press, Philadelphia.

Nicholls, A.R., Holt, N.L., Polman, R.C. Remco, C.J.P. and Bloomfield, J. (2006), "Stressors, coping, and coping effectiveness among professional rugby union players", *The Sport Psychologist,* Vol. 20 No. 3, pp. 314-329.

Nicholls, A.R., Holt, N.L., Polman, R.J.C. and James, D.W.G. (2005), "Stress and coping among international adolescent golfers", *Journal of Applied Sport Psychology,* Vol. 17, pp. 333-340.

Nicholls, A.R. and Polman, R.C.J. (2007), "Stressors, coping, and coping effectiveness among players from the England under-18 rugby union team", *Journal of Sport Behavior,* Vol. 30 No. 2, pp. 199-218.

Ohly, S., Sonnentag, S., Niessen, C. and Zapf, D. (2010), "Diary studies in organizational research: An introduction and some practical recommendations", *Journal of Personnel Psychology,* Vol. 9 No. 2, pp. 79–93.

Patton, M.Q. (2002), *Qualitative research and evaluation methods,* Thousand Oaks, C.A, Sage.

Rodrigues, S., Kaiseler, M. and Queirós, C. (2015), "Ecological approaches on stress assessment: A systematic review", *European Psychologist,* Vol. 20 No.3, pp. 204-226.

Segerstrom, S.C. and O´Connor, D.B. (2012), "Stress, health and illness: Four challenges for the future", *Psychology & Health*, Vol. 27 No.2, pp. 128-140.

Shane, J. M. (2013), "Daily work experiences and police performance", *Police Practice and Research,* Vol. 14 No. 1, pp. 17-34.

Stanley, I.H., Hom, M.A. and Joiner, T.E. (2016), "A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics", *Clinical Psychology Review,* Vol. 44, pp. 25–44.

Strahler, J. and Ziegert, T. (2015), "Psychobiological stress response to a simulated school shooting in police officers", *Psychoneuroendocrinology,* Vol. 51, pp. 80-91.

Suresh, R.S., Anantharaman, R.N., Angusamy, A. and Ganesan, J. (2013), "Sources of job stress in police work in a developing country", *International Journal of Business and Management,* Vol. 8 No.13, pp. 102-110.

van Gelderen, B.R., Konijn, E.A. and Bakker, A.B. (2016), "Emotional labor among police officers: a diary study relating strain, emotional labor, and service performance" *International Journal of Human Resource Management,* pp. 1-28.

Vertovec, S. (2007), "Super-Diversity and its implications", *Ethnic and Racial Studies*, Vol. 30 No. 6, pp. 1024–1054.

Violanti, J.M. and Aron, F. (1995), "Police stressors: Variations in perceptions among police personnel", *Journal of Criminal Justice,* Vol. 23 No. 3, pp. 287-294.

Table 1

Classification, appraisal and frequency of stressors and the correspondence mean.

General dimension	Stressors	Illustrative data	Frequency	Mean Stress appraisal
Operational stressors			**88**	
	Public disorder	"The citizens did not respect our orders"	32	3.8
	Vehicles chase	"We had to chase a suspect motorcycle driver carrying a child"	10	3.4
	Neighborhoods interventions	"We had to get into a problematic neighborhood"	9	3.7
	Drug traffic	"We conducted an operation to combat drug trafficking"	7	3.3
	Gun situation	"We had to shoot a gun to protect ourselves from the suspects threats"	6	4.8
	Suspects approach	"We had to address suspect men, who seemed outraged about the situation"	5	3.4
	Detentions	"We had to handcuff an exalted man, that was causing problems"	5	2.6
	Suspects escape	"A driver did not stop at a red light and escaped from the police"	4	3.5
	Urgency driving	"We had to drive fast to answer an emergency call"	3	3.3
	Aggression attempts	"Some citizens tried to attack us"	2	5.0
	Use of force	"A suspect resisted the arrestment, so we had to use force to stop him"	2	4.5
	Property issues	"We had a land subsidence and leaking gas situation to solve"	3	3.0
Organizational stressors			**24**	
	Inadequate resources	"I could not solve a situation because I did not have the material resources I need for that purpose".	11	4.6
	Conflicts with superiors	"I have a disagreement with my superior"	4	2.8

	Conflicts with colleagues	"I have an argued with a colleague"	4	2.8
	Work overload	"The work was too much"	2	4.0
	Overtime hours	"I leave the police station long after the shift have finished"	2	5.0
	Making compensatory day off	"I have to make a compensatory day off"	1	3.0

Note: Bold indicates the total frequency of general dimensions of stress

Table 2

Classification and frequency of coping responses

General dimension	2nd order theme	1st order theme	Illustrative data	Frequency
PF Coping				**37**
	Active coping	Argued	"I argued for my rights"	24
		Increased concentration on task	"I tried to get focused on what I was doing"	2
		Problem solving	"I solved the situation with the resources that I had available at that moment"	2
		Taking an action plan	"I took actions in order to coordinate the work with my colleagues"	4
	Seeking social support for instrumental reasons	Talk with people involved	"I talked with the people involved in that situation"	5
EF Coping				**75**
	Seeking social support for emotional reasons	Peer support	"I talked with my colleagues in order to alleviate stress"	34
	Positive reinterpretation and growth	Positive thinking	"I tried to think positive"	9
	Mental disengagement	Distraction	"I tried to think in something else"	28
	Behavioral disengagement	Smoking	"I smoked a cigarrete to relax"	4

Note: Bold indicates the total frequency of each general dimension

Table 3

Coping strategies, frequencies and mean effectiveness in managing the three most frequently reported stressors

Stressor	Coping strategy	Frequency	Mean coping effectiveness
Public disorder	Smoking	1	4.0
	Peer support	7	3.7
	Argued	9	3.7
	Positive thinking	13	3.8
	Talking with people involved	3	3.7
	Taking an action plan	1	4.0
Inadequate resources	Peer support	4	2.5
	Positive thinking	5	3.5
	Argued	4	3.0
Vehicles chase	Peer support	5	4.0
	Argued	1	3.0

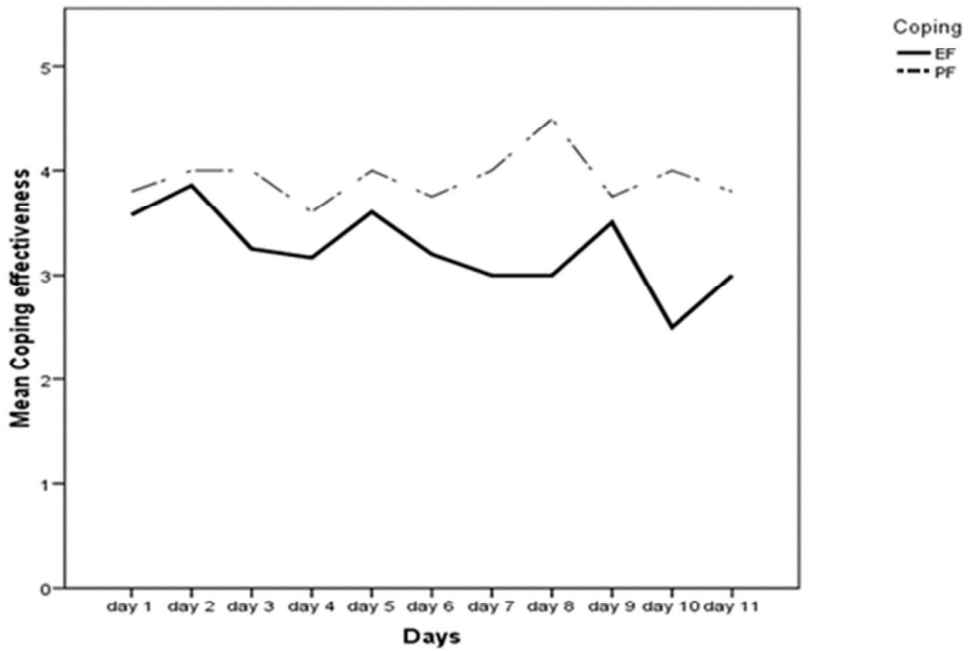

Figure 1. Coping effectiveness variation displayed by dimension of coping during an 11-day period.